



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,374	11/14/2001	Toshinori Tanaka	Q67313	6921

7590 04/24/2002

SUGHRUE MION, PLLC  
2100 Pennsylvania Avenue, NW  
Washington, DC 20037-3213

EXAMINER

PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/987,374

Applicant(s)

TANAKA ET AL.

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed November 14, 2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (U. S. Pat. No. 4,532,449) in view of M. J. Baldwin (U. S. Pat. No. 2,632,125).

Aoki discloses an armature for a dynamo-electric machine comprising:

- a shaft (4)
- a core (8), secured to the shaft (4), having a plurality of slots extending in an axial direction formed on an outer circumferential surface of the core (8)
- a coil (1) comprising a plurality of coil portions (1) formed by winding wires a plurality of turns around a pair of the slots separated by a predetermined number of the slots and offsetting each of the coil portions (1) in the

Art Unit: 2834

circumferential direction of the core (8), wherein at least one pair of adjacent coil portions (1) share a common one of the slots

- a commutator (10) secured to the shaft (4), the commutator (10) comprising a plurality of segments

However, Aoki does not disclose a plurality of equalizing connectors for permanently electrically connecting pairs of the segments that should have the same electric potential, so that each of pairs of the coil portions that should have the same electric potential has a substantially equal electrical potential.

M. J. Baldwin discloses a plurality of equalizing connectors (25, 26, 16) for permanently electrically connecting pairs of the segments (1-7) that should have the same electric potential, so that each of pairs of the coil portions (9, 11) that should have the same electric potential has a substantially equal electrical potential. M. J. Baldwin's invention has the purpose of reducing the unequal voltages that may occur in the winding, this unequal voltages cause circulating currents through the windings and through the brushes, which cause unnecessary heating of the coils and brushes, tending to produce poor commutation and reduce the overall efficiency of the machine.

It would have been obvious at the time the invention was made to modify the armature for a dynamo-electric machine of Aoki and provide it with a plurality of equalizing connectors as disclosed by M. J. Baldwin for the purpose of reducing the unequal voltages that may occur in the winding, this unequal voltages cause circulating currents through the windings and through the brushes, which cause unnecessary

heating of the coils and brushes, tending to produce poor commutation and reduce the overall efficiency of the machine.

2. Claims 2 to 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki in view of M. J. Baldwin and further in view of Rabe (U. S. Pat. No. 4,635,349).

Aoki and M. J. Baldwin disclose an armature for a dynamo-electric machine as disclose on item 1 above. However, neither Aoki nor M. J. Baldwin disclose that the number of turns of the wires in the coil portions in an initial lap is different from the number of turns of the wires in subsequent laps. Neither Aoki nor M. J. Baldwin disclose that the number of vacant slots between adjacent the coil portions is non uniform. Neither Aoki nor M. J. Baldwin disclose that the number of turns of the wires in the coil portions in the initial lap is less than the number of turns of the wires in the coil portions in the subsequent laps. Neither Aoki nor M. J. Baldwin disclose that the number of turns of the wires in the coil portions in the initial lap is greater than the number of turns of the wires in the coil portions in the subsequent laps.

Rabe discloses that the number of turns of the wires in the coil portions in an initial lap is different from the number of turns of the wires in subsequent laps. Rabe discloses that a number of vacant slots between adjacent coil portions is non-uniform. Rabe discloses that the number of turns of the wires in the coil portions in the initial lap is less than the number of turns of the wires in the coil portions in the subsequent laps. Rabe discloses that the number of turns of the wires in the coil portions in the initial lap is greater than the number of turns of the wires in the coil portions in the subsequent

laps (figures 3 to 8). Rabe's invention has the purpose of improving the utilization of the stator core slot area.

It would have been obvious at the time the invention was made to modify the armature of Aoki and provide it with the number of turns of wires in the coil portions configurations, and the number of vacant slots between adjacent the coil portions configuration as disclosed by Rabe for the purpose of maximizing the use of the slot area in the armature thus making possible reduction in the size of the motor without reducing the output power of the motor.

Referring to claims 1-5, no patentable weight has been given to the method of manufacturing limitations (i. e. "a plurality of coil portions are formed simultaneously") since "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

Application/Control Number: 09/987,374  
Art Unit: 2834

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez  
April 22, 2002

  
NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800